

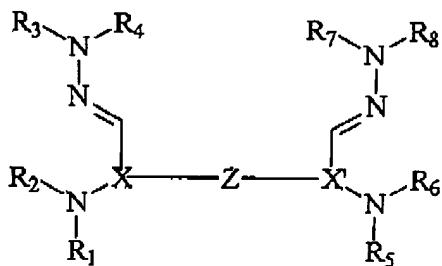
Application No. 10/749,171

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1. (Previously Amended) An organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising:

(a) a charge transport material having the formula



where R₁, R₂, R₃, R₄, R₅, R₆, R₇, and R₈ are, each independently, an alkyl group, an alkaryl group, an aryl group, or heterocyclic group, X and X' are, each independently, aromatic groups, and Z is a divalent linking group having the formula -(CH₂)_m-, branched or linear, where m is an integer between 1 and 30, inclusive, one or more of the methylene groups may be replaced by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR₉ group, a CHR₁₀ group, or a CR₁₁R₁₂ group where R₉ and R₁₀ are, each independently, H, hydroxyl, thiol, an alkoxy group, an alkyl group, or an aryl group, and R₁₁ and R₁₂ are, each independently, H, hydroxyl, thiol, an alkoxy group, an alkyl group, an aryl group,

Application No. 10/749,171

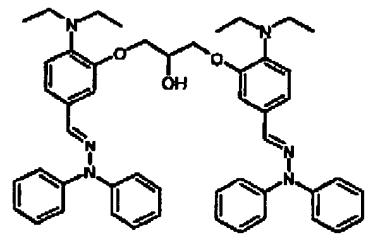
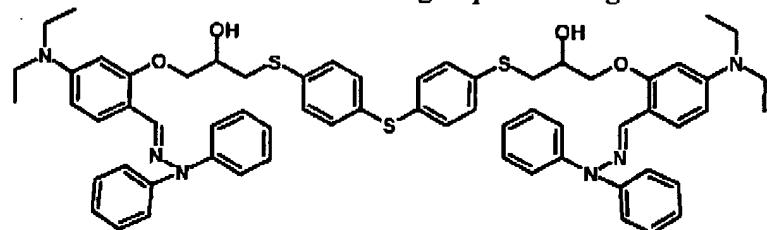
or a part of a cyclic ring and one or more methylene groups is replaced by S, C=O, O=S=O, a heterocyclic group, urethane, urea, an ester group, a NR₉ group a CHR₁₃ group, a CR₁₄R₁₅ group where R₁₃, R₁₄ and R₁₅ are independently hydroxyl, thiol, an alkoxy group or an alkyl group; and

(b) a charge generating compound.

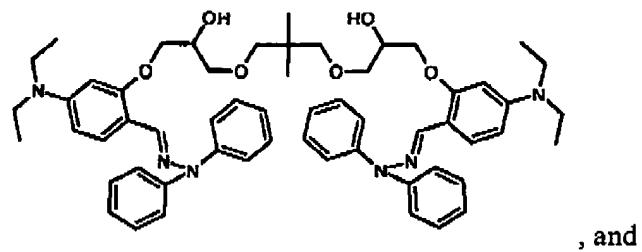
2. (Original) An organophotoreceptor according to claim 1 wherein R₁, R₂, R₅, and R₆, each independently, comprise an aryl group.

3. (Original) An organophotoreceptor according to claim 1 wherein X and X', each independently, comprise an aryl group.

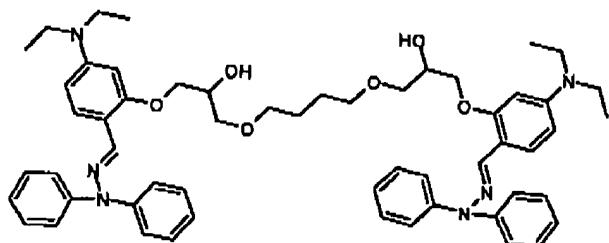
4. (Original) An organophotoreceptor according to claim 1 wherein the charge transport material has a formula selected from the group consisting of the following:



Application No. 10/749,171



, and



5. (Original) An organophotoreceptor according to claim 1 wherein the photoconductive element further comprises a second charge transport material.

6. (Original) An organophotoreceptor according to claim 5 wherein the second charge transport material comprises an electron transport compound.

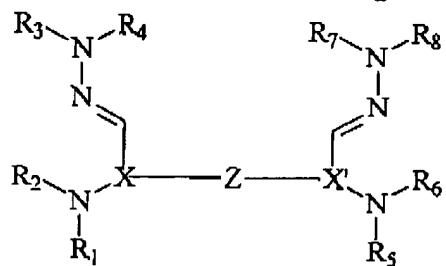
7. (Original) An organophotoreceptor according to claim 1 wherein the photoconductive element further comprises a binder.

8. (Previously Amended) An electrophotographic imaging apparatus comprising:
(a) a light imaging component; and
(b) an organophotoreceptor oriented to receive light from the light imaging component, the organophotoreceptor comprising an electrically conductive substrate and a

Application No. 10/749,171

photoconductive element on the electrically conductive substrate, the photoconductive element comprising:

(i) a charge transport material having the formula



where R_1 , R_2 , R_3 , R_4 , R_5 , R_6 , R_7 , and R_8 are, each independently, an alkyl group, an alkaryl group, an aryl group, or heterocyclic group, X and X' are, each independently, aromatic groups, and Z is a divalent linking group having the formula $-(CH_2)_m-$, branched or linear, where m is an integer between 1 and 30, inclusive, one or more of the methylene groups may be replaced by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR_9 group, a CHR_{10} group, or a $CR_{11}R_{12}$ group where R_9 and R_{10} are, each independently, H, hydroxyl, thiol, an alkoxy group, an alkyl group, or an aryl group, and R_{11} , and R_{12} are, each independently, H, hydroxyl, thiol, an alkoxy group, an alkyl group, an aryl group, or a part of a cyclic ring and one or more methylene groups is replaced by S, C=O, O=S=O, a heterocyclic group, urethane, urea, an ester group, a NR_9 group a CHR_{13} group, a $CR_{14}R_{15}$ group where R_{13} , R_{14} and R_{15} are independently hydroxyl, thiol, an alkoxy group or an alkyl group; and

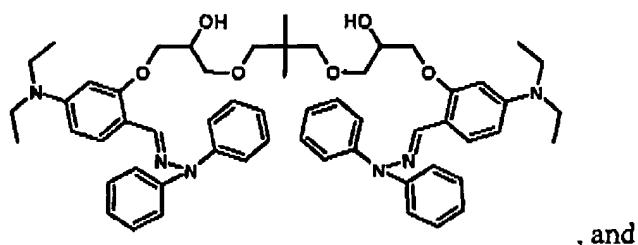
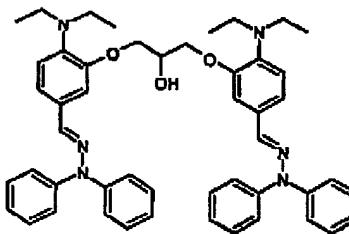
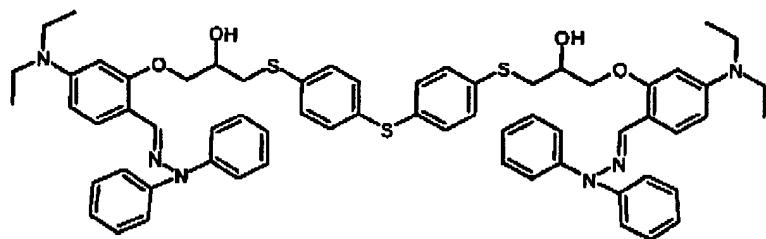
(ii) a charge generating compound.

9. (Original) An electrophotographic imaging apparatus according to claim 8 wherein R_1 , R_2 , R_5 , and R_6 , each independently, comprise an aryl group.

Application No. 10/749,171

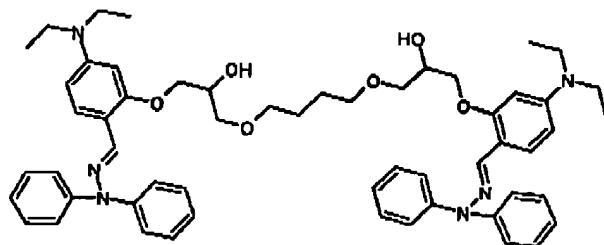
10. (Original) An electrophotographic imaging apparatus according to claim 8 wherein X and X', each independently, comprise an aryl group.

11. (Original) An electrophotographic imaging apparatus according to claim 8, wherein the charge transport material has a formula selected from the group consisting of the following:



, and

Application No. 10/749,171



12. (Original) An electrophotographic imaging apparatus according to claim 8 wherein the photoconductive element further comprises a second charge transport material.

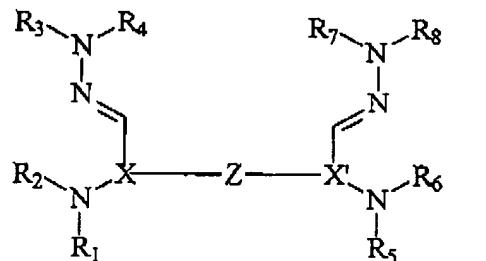
13. (Original) An electrophotographic imaging apparatus according to claim 12 wherein second charge transport material comprises an electron transport compound.

14. (Original) An electrophotographic imaging apparatus according to claim 8 further comprising a liquid toner dispenser.

15. (Previously Amended) An electrophotographic imaging process comprising;

(a) applying an electrical charge to a surface of an organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising

(i) a charge transport material having the formula



Application No. 10/749,171

where R_1 , R_2 , R_3 , R_4 , R_5 , R_6 , R_7 , and R_8 are, each independently, an alkyl group, an alkaryl group, an aryl group, or heterocyclic group, X and X' are, each independently, aromatic groups, and Z is a divalent linking group having the formula $-(CH_2)_m-$, branched or linear, where m is an integer between 1 and 30, inclusive, one or more of the methylene groups may be replaced by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR₉ group, a CHR₁₀ group, or a CR₁₁R₁₂ group where R₉ and R₁₀ are, each independently, H, hydroxyl, thiol, an alkoxy group, an alkyl group, or an aryl group, and R₁₁ and R₁₂ are, each independently, H, hydroxyl, thiol, an alkoxy group, an alkyl group, an aryl group, or a part of a cyclic ring and one or more methylene groups is replaced by S, C=O, O=S=O, a heterocyclic group, urethane, urea, an ester group, a NR₉ group a CHR₁₃ group, a CR₁₄R₁₅ group where R₁₃, R₁₄ and R₁₅ are independently hydroxyl, thiol, an alkoxy group or an alkyl group; and

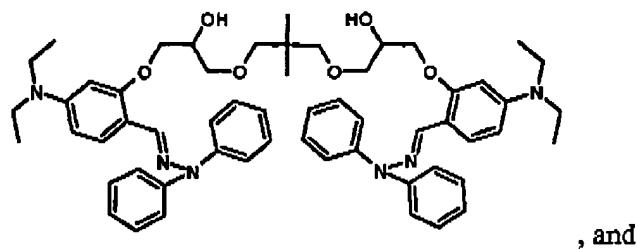
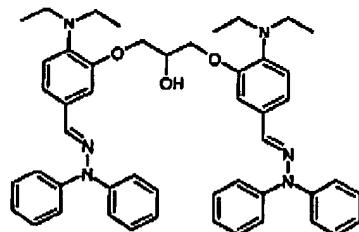
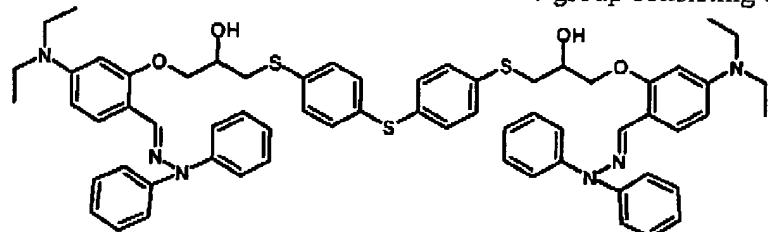
- (ii) a charge generating compound.
- (b) imagewise exposing the surface of the organophotoreceptor to radiation to dissipate charge in selected areas and thereby form a pattern of charged and uncharged areas on the surface;
- (c) contacting the surface with a toner to create a toned image; and
- (d) transferring the toned image to substrate.

16. (Original) An electrophotographic imaging process according to claim 15 wherein R_1 , R_2 , R_5 , and R_6 , each independently, comprise an aryl group.

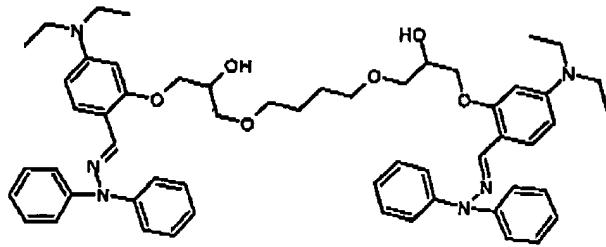
17. (Original) An electrophotographic imaging process according to claim 15 wherein X and X' , each independently, comprise an aryl group.

Application No. 10/749,171

18. (Original) An electrophotographic imaging process according to claim 15 wherein the charge transport material has a formula selected from the group consisting of the following:



, and



19. (Original) An electrophotographic imaging process according to claim 15 wherein the photoconductive element further comprises a second charge transport material.

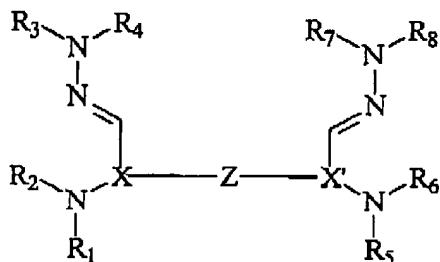
Application No. 10/749,171

20. (Original) An electrophotographic imaging process according to claim 19 wherein the second charge transport material comprises an electron transport compound.

21. (Original) An electrophotographic imaging process according to claim 15 wherein the photoconductive element further comprises a binder.

22. (Original) An electrophotographic imaging process according to claim 15 wherein the toner comprises a liquid toner comprising a dispersion of colorant particles in an organic liquid.

23. (Currently Amended) A charge transport material having the formula



where R₁, R₂, R₃, R₄, R₅, R₆, R₇, and R₈ are, each independently, an alkyl group, an alkaryl group, an aryl group, or heterocyclic group, X and X' are, each independently, aromatic groups, and Z is a divalent linking group having the formula -(CH₂)_m-, branched or linear, where m is an integer between 1 and 30, inclusive, one or more of the methylene groups may be replaced by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR₉ group, a CHR₁₀ group, or a CR₁₁R₁₂ group where R₉ and R₁₀ are, each independently, H, hydroxyl, thiol, an alkoxy group, an alkyl group, or an aryl group, and R₁₁, and R₁₂ are, each independently, H, hydroxyl, thiol, an alkoxy group, an alkyl group, an aryl group,

Application No. 10/749,171

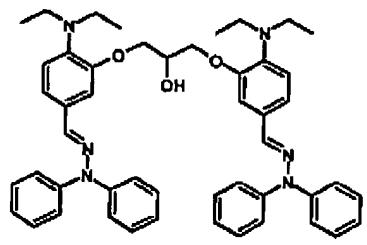
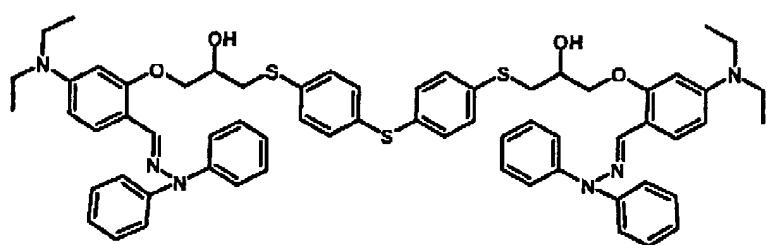
or a part of a cyclic ring and one or more methylene groups is replaced by S, C=O, O=S=O, a heterocyclic group, urethane, urea, an ester group, a NR₉ group a CHR₁₃ group, a CR₁₄R₁₅ group where R₁₃, R₁₄ and R₁₅ are independently hydroxyl, thiol, an alkoxy group or an alkyl group[[]].

[.]]

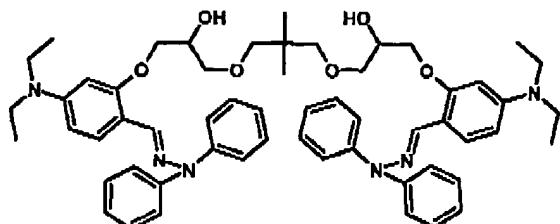
24. (Original) A charge transport material according to claim 23 wherein R₁, R₂, R₅, and R₆, each independently, comprise an aryl group.

25. (Original) A charge transport material according to claim 23 wherein X and X', each independently, comprise an aryl group.

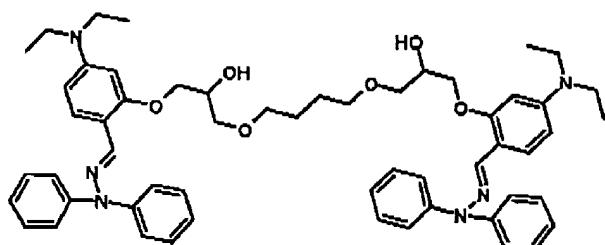
26. (Original) A charge transport material according to claim 23 wherein the charge transport material has a formula selected from the group consisting of the following:



Application No. 10/749,171

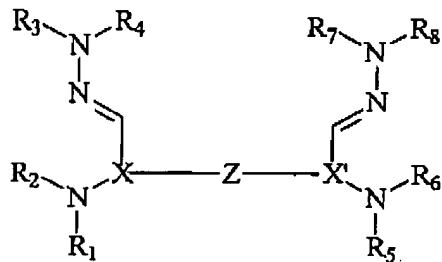


, and



27. (Currently Amended) An organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising:

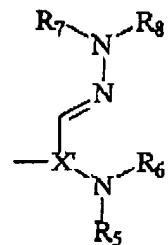
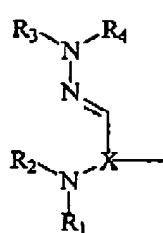
(a) a charge transport material having the formula



where R₁, R₂, R₅, and R₆ are, each independently, an alkaryl group, an aryl group, or heterocyclic group, R₃, R₄, R₇, and R₈ are, each independently, an alkyl group, an alkaryl group, an aryl group, or heterocyclic group, X and X' are, each independently, aromatic groups, and Z is a divalent linking group having the formula -(CH₂)_m-, branched or linear, where m is an integer between 1 and 30, inclusive, and one or more of the methylene groups may be replaced

Application No. 10/749,171

by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR₉ group, a CHR₁₀ group, or a CR₁₁R₁₂ group where R₉ and R₁₀ are, each independently, H, hydroxyl, thiol, an alkoxy group, an alkyl group, or an aryl group, and R₁₁, and R₁₂ are, each independently, H, hydroxyl, thiol, an alkoxy group, an alkyl group, an aryl group, or a part of a cyclic ring, wherein the charge transport material is asymmetric with respect to the linking group Z such that the chemical group



is not identical to the chemical group _____; and

(b) a charge generating compound.